

REMARKS

The Office Action of March 3, 2003 has been carefully considered along with the prior art references cited therein. Claims 1-64 are pending in the application. Claims 10 and 42 are cancelled without prejudice.

The Specification has been amended to overcome objections by the examiner. No new matter is added. Claims 50 and 63 have been amended to overcome a rejection under 35 USC 112 or to correct minor deficiencies. No new matter is added.

Multiple claims, including independent Claims 1, 19, 31, 47, 51 and 59 were rejected under 35 USC 102(b) as anticipated by Teplitz or Kafader or Graham. Each of these claims has been amended to better claim that which the Applicant considers his invention. Each of these independent claims has been amended to require the inclusion or use of a propellant to create a high-energy fluid stream. Spec., para. 61. The high-energy stream substantially vacates the casing through the perforations created by the mechanical perforator and fractures the cement sheath and/or surrounding formation. This is what is meant by "propellant." The term as used in the Specification and the Claims does not encompass the use of a perforation "gun" which fires bullets, or projectiles, into the formation. This distinction is evident at Spec., para. 3, for example. Neither Kafader nor Graham are cited by the examiner as teaching the use of a propellant, or perforation gun, in conjunction with a mechanical perforator. Teplitz is cited for teaching such a use. However, the propellant use required by the claims as amended would not have been possible at the time of Teplitz, and therefore Teplitz does not anticipate the claims. Teplitz uses a "gun perforating device" with "firing barrels" which utilize "bullets." Col. 3, ll. 25-36. In fact, this was the typical means of perforating at the time. Col. 3, ll. 29-30. Since that time, the use of propellants which do not employ a bullet, slug or any other solid projectile have come into use. Spec., para. 3. The invention of the application is designed to perforate the casing mechanically and then use a propellant, not a gun, to create a high-energy fluid stream which will act on the cement sheath and/or formation. This results in less energy being used in the perforation of the casing. Spec., para. 4. The propellants used in the invention typically employ a substance,

like potassium perchlorate, which, upon ignition, creates a jet of fluid, such as CO₂, which is expelled into the wellbore. Such devices are commercially available from, for example, Owen's Oil Tools under brand names such as StimGun (trademark). Teplitz at Col. 4 teaches using an explosion within the casing which does not penetrate the casing, but rather causes it to bulge, thereby cracking the surrounding cement sheath. Each of the independent claims requires the perforation of the casing prior to the use of the propellant. These independent claims are believed to be in condition for allowance.

Rejections were also made under 35 USC 103 over the previously mentioned art as well as additional prior art patents. These claims, however, are distinguishable over Teplitz as explained above and/or are dependent on now-allowable claims. Additionally, none of the cited patents teaches or suggests the combination thereof.

Applicant notes with appreciation the statement of allowability of Claim 42. Claim 42 has been cancelled and the restrictions thereof included in amended independent Claim 41. Consequently, Claims 41 and 43-46 are believed to be in condition for allowance.

If the examiner is of the opinion that a telephone interview would speed prosecution of this application, please do not hesitate to call Peter Schroeder at 214/220-0444.

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Respectfully submitted,



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